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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,461	02/26/2002	Andrew S Treen	124-926	3390

7590

01/21/2003

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EXAMINER

SMITH, RICHARD A

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 01/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,461

Applicant(s)

TREEN ET AL. 

Examiner

R. Alexander Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b)

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 and 6.
- ☐ Interview Summary (PTO-413) Paper No(s) _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other _____.

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DETAILED ACTION

Drawings

1. Figures 3a and 3b are objected to as failing to comply with 37 CFR 1.84(p)(4) because the applicant has used different reference characters to designate the same elements: 9 and 15, 10 and 16, 11 and 17, 12 and 18, 13 and 19. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. On sheet 2, the lower right figure labeled as "2d" should be --2e--.

Specification

3. The specification is objected to because of the following informalities:
 - a. The section headings are missing.
 - b. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

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Claim Objections

4. Claim 11 is objected to since claim 11 is dependent from itself. For the purpose of this Office action and to expedite prosecution, the Examiner is treating claim 11 as if it is dependent from claim 1.

5. Claims 1-18 and are objected to because of the following informalities:

Claim 1:

- a) It appears that the thought started in line 3 is carried through to line 5. Similar the thought started in line 6 is carried through to line 7. Therefore, is the disconnection between lines 4-5, i.e., "display ¶ diaphragm" and lines 6-7, i.e., "relative ¶ movement", intentional?
- b) "indicator" in line 6 should be --indicator diaphragm-- in order to properly refer to its antecedent in line 3.

Claim 6: "biasing means" does not have a proper antecedent in claim 5 which discloses the limitation of "the second surface is biased against."

Claim 16: "an" should be deleted.

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Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 5: "the second surface" and "the rigid structure" each lack an antecedent and makes the claim indefinite because the examiner cannot discern limitations introduced in claims 5/2/1 which are, or comprise, the second surface or the rigid structure. Nor can the examiner determine the relationship of a second surface and a rigid structure with respect to the structural limitations already introduced in claims 2 and 1. Therefore since there is no structure in claims 1, 2 and 5 to clarify what comprises the second surface or the rigid structure and no structure of their relationship to the limitations in claims 1 and 2, no prior art is being applied to claims 5 and 6.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4, 7-9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,189,979 to Popenoe.

Popenoe discloses a pressure indicator having a display diaphragm (top half of 25) and an indicator diaphragm (16) bearing a recognizable configuration or pattern (20) coupled to and in fluid communication with the display diaphragm (via 25 and 27 and forming a compartment (24) with the display diaphragm, wherein, in use, a change in pressure applied to the indicator causes relative movement between the diaphragms which is observable either when the pattern or configuration abuts the display diaphragm, or when the pattern or configuration becomes visible through the display diaphragm, a means to amplify the relative movement between the diaphragms which results from the change in pressure (16 with 20), the means to amplify the change in pressure comprises an article having a first surface (top surface of 20) and a second surface (the bottom surface of 16), the second surface having a larger cross sectional area than the first surface: wherein the first surface is in fluid communication with one of the diaphragms and in use, a change in pressure applied to the second surface causes an amplified movement of the first surface, the first surface comprises the indicator diaphragm (again, 16 with 20), the display diaphragm is transparent, the compartment contains a liquid or gel (27) wherein the liquid or gel is partially or fully opaque, and either the display diaphragm (column 3, lines 48-52) or the indicator diaphragm (column 3, lines 16-22) comprises a flexible polymer. Furthermore,

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Popenoe discloses an indicator diaphragm bearing a recognizable configuration or pattern having a component wherein the component is colored.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popenoe '979 in view of U.S. 3,602,186 to Popenoe

Popenoe '979 teaches all that is claimed as discussed in the above rejections of claims 1-4, 7-9 and 14 except for the limitations of claims 10-13.

With respect to claim 10, 11 and 13: Popenoe '186 discloses a pressure indicator wherein the recognizable configuration or pattern comprises a symbol or graphic projecting from the surface of the indicator diaphragm towards the display diaphragm (see 11" in figure 5), the configuration or pattern comprises at least two components (each of the steps of disc 11" in figure 5) wherein each said component contacts the display diaphragm at different pressures in order to accommodate a broader range of pressures that can be applied, and wherein the at least two components have different visibility (via the step sizes of disc 11", the larger sizes being more visible than the smaller.) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to alter the indicator diaphragm, taught by Popenoe '979, by adding the features of the recognizable configuration or pattern projecting and having at least two components, as taught by Popenoe '186, in order to allow a person to adjust the pressure within a broader range of values and to gauge that range via the different visibilities.

With respect to claim 12, i.e., the at least two components have different colours: Popenoe '979 discloses an indicator diaphragm bearing a recognizable configuration or pattern having a component wherein the component is colored. Popenoe '186 discloses at least two components. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to add a different color to each of the at least two components for a multiplied

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effect, in order to make each distinct pressure within the range, taught by Popenoe '979 as modified by Popenoe '186, more obvious to the user.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Popenoe '979.

Popenoe '979 teaches all that is claimed as discussed in the above rejections of claims 1-4, 7-9 and 14 except for the limitations of claim 17.

The method steps of indicating fluidic or mechanical pressure using said pressure indicator will be met during the normal operation of the indicator disclosed by Popenoe '979.

13. Claims 15, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,755,634 to Huang in view of U.S. 5,189,979 to Popenoe.

Huang discloses a ball having a pressure indicator and an apparatus comprising a fluid reservoir and a pressure indicator, said apparatus being inflatable (27), said pressure indicator being electrical.

Huang does not disclose a pressure indicator with the limitations of claim 1.

Popenoe discloses a pressure indicator having a display diaphragm (top half of 25) and an indicator diaphragm (16) bearing a recognizable configuration or pattern (20) coupled to and in fluid communication with the display diaphragm (via 25 and 27 and forming a compartment (24) with the display diaphragm, wherein, in use, a change in pressure applied to the indicator causes relative movement between the diaphragms which is observable either when the pattern or configuration abuts the display diaphragm, or when the pattern or configuration becomes visible through the display diaphragm. Therefore it would have been obvious to one of ordinary skill in

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the art at the time of the invention to replace the electric pressure indicator, taught by Huang, with the pressure indicator, taught by Popenoe, in order to (1) eliminate the need for a battery, (2) to prevent the pressure indicator from not working due to a dead battery, and to allow the ball and apparatus to be used in inclement weather such as rain or under adverse conditions presented by puddles (water in general) or on the beach (salt contained in ocean water).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related indicators, apparatus, and methods. Of particular note are the following:

- a. U.S. 5,189,979 to Popenoe, in addition to the above, discloses a second surface (using the definition of claim 3) biased against a rigid structure (the housing 11 or ring 19) wherein a biasing means (the indicator diaphragm itself) is of spring steel or elastomer material (column 3, lines 16-22).
- b. U.S. 6,470,821 to Hagopian discloses a second surface 502 (using the definition of claim 3) biased against a rigid structure (the bottom of the well holding 514) wherein a biasing means 514 is of a spring or elastomer material.

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- c. U.S. 5,014,786 to Kobayashi discloses a second surface (figure 2, the back part of 18 or the face 17 of member 16) biased against a rigid structure (22) wherein a biasing means (23) is of a spring or elastomer material.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Smith whose telephone number is (703) 305-0647. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:30 PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



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Supervisory Patent Examiner
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RAS
January 16, 2003